

## CLAIMS

1. An apparatus for sending a wireless audio signal from a transmitter to a  
5 receiver, allowing relatively unrestricted range of movement and placement of  
the receiver, comprising:

a signal generator;

at least one transmitting element operatively connected to said signal  
generator for transmitting infrared signals in a direction to reflect said signal  
10 off of an object;

a receiver, said receiver, receiving said infrared signal; and

a listening means.

2. The apparatus of Claim 1, wherein said signal generator is an audio device.

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3. The apparatus of Claim 2, wherein said audio device comprises any of:

a CD player, tuner, tape playing device and phonograph.

4. The apparatus of Claim 1, wherein said object comprises any of:

walls, ceilings, floors, furniture, wall hangings, fixtures, and living organisms.

5. The apparatus of Claim 1, wherein said transmitted signal is divergent.

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6. The apparatus of Claim 1, further comprising:

a signal diverging means.

7. The apparatus of Claim 6, wherein said signal diverging means is a plano-concave lens, said lens affixed to said transmitter to produce said divergent signal.

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8. The apparatus of Claim 1, wherein said listening means comprises any of:

headphones and speakers.

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9. The apparatus of Claim 1, further comprising:

a signal converging means.

10. The apparatus of Claim 9, wherein said converging means is affixed to

20 said receiver producing said convergent signal.

11. The apparatus of Claim 11, wherein said signal converging means comprises any of:

a plano-convex lens and a plano-concave lens.

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12. The apparatus of Claim 1, further comprising:

a first linear polarizer, said first linear polarizer affixed to said transmitter.

10 13. The apparatus of Claim 12, wherein said linear polarizer produces a signal which lies substantially in one plane.

14. The apparatus of Claim 12, wherein said first linear polarizer produces a signal that lies in planes over an angular range.

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15. The apparatus of Claim 12, further comprising:

a second linear polarizer, said second linear polarizer in alignment with said first linear polarizer and connected to a receiver.

16. The apparatus of Claim 15, wherein said second polarizer receives said signal over an angular range.

17. The apparatus of Claim 1, further comprising:

5           a filtering means, said filtering means in combination with said receiver, said filtering means capable of filtering out light that does not lie in the infrared spectrum.

18. The apparatus of Claim 17, wherein said filtering means comprises any of:

10           a coating and a computer.

19. The apparatus of Claim 18, wherein said computer receives said signal and electronically subtracts signal wavelengths not in the infrared spectrum.

15   20. The apparatus of Claim 1, further comprising:

          a parabolic deflector, said deflector designed to reflect an incoming signal toward a receiving portion of said receiver.

21. The apparatus of Claim 1, further comprising:

a counter-weight, said counter-weight integrated with said receiver so as to cause a receiving portion of said receiver to stay level.

22. The apparatus of Claim 1, wherein said signal contains data.

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23. The apparatus of Claim 22, further comprising:

a network card, said network card integrated with said receiver, said network card connected to computer and transmitting said data signal to said computer.

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24. An apparatus for providing a wireless means for transmitting a signal from a source to headphones or speakers, comprising:

an infrared transmitter which transmits an infrared signal;

a processing means which allows said signal to reflect off objects;

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a concave lens which diverges said infrared signal;

a converging means for converging said reflected signal;

a receiver which receives said reflected signal; and

a listening means for listening to said signal.

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25. A method for sending a wireless audio signal from a transmitter to a receiver, allowing relatively unrestricted range of movement and placement of the receiver, comprising the steps of:

generating a signal with a signal generating means;

5 transmitting a signal in a direction to reflect off of an object with at least one transmitting element operatively connected to said signal generating means;

receiving said infrared signal with a receiver; and

listening to said signal with a listening means.

10 26. The method of Claim 25, wherein said signal generator is an audio device.

27. The method of Claim 26, wherein said audio device comprises any of:

a CD player, tuner, tape playing device and phonograph.

15 28. The method of Claim 25, wherein said object comprises any of:

walls, ceilings, floors, furniture, wall hangings, fixtures, and living organisms.

20 29. The method of Claim 25, wherein said transmitted signal is divergent.

30. The method of Claim 25, further comprising the step of:

diverging said signal with a signal diverging means.

5 31. The method of Claim 30, wherein said signal diverging means is a plano-concave lens, said lens affixed to said transmitter to produce said divergent signal.

32. The method of Claim 25, wherein said listening means comprises any of:

10 headphones and speakers.

33. The method of Claim 25, further comprising the step of:

converging a signal with a signal converging means.

15 34. The method of Claim 33, wherein said converging means is affixed to said receiver producing said convergent signal.

35. The method of Claim 33, wherein said signal converging means comprises any of:

20 a plano-convex lens and a plano-concave lens.

36. The method of Claim 25, further comprising the step of:

polarizing said signal with a first linear polarizer, said first linear polarizer affixed to said transmitter.

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37. The method of Claim 36, wherein said linear polarizer produces a signal that lies substantially in one plane.

38. The method of Claim 36, wherein said first linear polarizer produces a  
10 signal that lies in planes over an angular range.

39. The method of Claim 36, further comprising the step of:

filtering said signal with a second linear polarizer, said second linear polarizer in alignment with said first linear polarizer and connected to a  
15 receiver.

40. The method of Claim 39, wherein said second polarizer receives said signal over an angular range.

20 41. The method of Claim 25, further comprising the step of:



filtering out light that does not lie in the infrared spectrum with a filtering means, said filtering means in combination with said receiver.

42. The method of Claim 41, wherein said filtering means comprises any of:

5 a coating and a computer.

43. The method of Claim 42, wherein said computer receives said signal and electronically subtracts signal wavelengths not in the infrared spectrum.

10 44. The method of Claim 25, further comprising the step of:

reflecting an incoming signal toward a receiving portion of said receiver with a parabolic deflector.

45. The method of Claim 25, further comprising the step of:

15 maintaining a constant receiver level with a counter-weight, said counter-weight integrated with said receiver.

46. The method of Claim 25, wherein said signal contains data.

20 47. The method of Claim 46, further comprising the step of:

transmitting said data signal with a network card, said network card integrated with said receiver, said network card connected to computer and transmitting said signal to said computer.

- 5 48. A method for providing a wireless means for transmitting a signal from a source to headphones or speakers, comprising the steps of:

transmitting infrared signal with an infrared transmitter;

processing said signal to reflect off objects;

diverging said infrared signal with a concave lens;

10 converging said reflected signal;

receiving said reflected signal with a receiver; and

listening to said signal.

49. A surround sound system comprising:

- 15 a surround sound derivation means, said derivation means producing rear surround sound signals from input left and right channel information; and

a front channel director, said director receiving said input channel information and providing left and right front surround sound signals to a television.

50. The system of Claim 49, further comprising:

a transmitting means for transmitting said rear signals to wireless speakers.

5 51. The system of Claim 50, wherein said transmitting means comprises:

an infrared transmitter which transmits an infrared signal capable of being substantially received after being reflected; and

a diverging means that diverges said infrared signal.

10 52. The system of Claim 51, further comprising a polarizer that polarizes said infrared signal.

53. The system of Claim 51, wherein said diverging means is a concave lens.

15 54. The system of Claim 51, wherein said wireless speakers comprise:

a converging means for converging a reflected signal; and

a receiver which receives said reflected signal.

55. The system of Claim 54, wherein said converging means comprises any

20 of:

a concave lens and convex lens.

56. The system of Claim 49, further comprising:

left and right speakers, said speakers coupled to said television.

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57. The system of Claim 56, wherein said left front signal is audibly reproduced by said left speaker and said right front signal is audibly reproduced on said right speaker.

10 58. The system of Claim 49, wherein said surround sound is produced by delaying said rear signals.

59. The system of Claim 49, further comprising:

rear left and right speakers coupled to a stand and an amplifier.

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60. The system of Claim 49, wherein said front channel director receives center channel information, and directs said center channel information to a center speaker.

20 61. A surround sound system comprising:

a surround sound processor, said processor producing rear surround sound signals from input left and right channel information, said input channel information from a computer sound card;

rear left and right speakers coupled to a stand, said rear speakers  
5 audibly reproducing said rear surround sound signals; and

a front channel director, said director receiving said input channel information and providing left and right front surround sound signals.

62.A method for producing a surround sound system comprising the steps of:

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producing rear surround sound signals from input left and right channel information; and

receiving said input channel information and providing left and right front surround sound signals to a television.

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63. The method of Claim 62, further comprising the step of:

transmitting said rear signals to wireless speakers.

64. The method of Claim 63, wherein said transmitting step comprises the

20 steps of:

transmitting an infrared signal with a transmitter;

reflecting said signals; and

diverging said infrared signal.

5 65. The method of Claim 64, further comprising the step of:

polarizing said infrared signal.

66. The method of Claim 64, wherein a concave lens produces said diverging.

10 67. The method of Claim 63, wherein said wireless speakers comprise:

a converging means for converging said reflected signal; and

a receiver which receives said reflected signal.

68. The method of Claim 67, wherein said converging means comprises any

15 of:

a concave lens and convex lens.

69. The method of Claim 62, further comprising the step of:

coupling left and right speakers to said television.

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70. The method of Claim 69, wherein said left front signal is audibly reproduced by a left front speaker and said right front signal is audibly reproduced on a right front speaker.

5 71. The method of Claim 62, wherein said surround sound is produced by delaying said rear signals.

72. The method of Claim 62, further comprising the step of:  
rear left and right speakers coupled to a stand and an amplifier.

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73. The method of Claim 62, further comprising the step of:  
directing center channel information to a center speaker.

74. A method for producing a surround sound system comprising the steps of:

15 producing rear surround sound signals from input left and right channel information, said input channel information from a computer sound card;

audibly reproducing said rear surround sound signals with rear left and right speakers, said rear speakers coupled to a stand;

receiving said input channel information with a front channel director;

20 and

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